

Customer No.: 31561
Docket No.: 11584-US-PA
Application No.: 10/708,446

To the Claims:

Claim 1. (currently amended) A cascade liquid crystal display (LCD) driving circuit, comprising:

a plurality of driving circuit units, coupling in cascade fashion, for outputting a data signal to drive a LCD;

a plurality of differential transmitters, for generating a differential signal and transmitting ~~which~~ the differential signal to a next stage of the driving circuit unit, each of the driving circuit units being disposed with one of the differential transmitters; and

a plurality of differential receivers, for receiving the differential signal from a previous stage of the driving circuit units, each of the driving circuit units being disposed with one of the differential receivers, wherein the differential signal transmitter comprises a signal amplifier, which converts and amplifies the differential signal before the differential signal is transmitted from the differential signal transmitter.

Claim 2. (original) The cascade LCD driving circuit as recited in claim 1, wherein the differential signal transmitter comprises:

a current source, for providing current that is required by the differential signal transmitter; and

a first transistor, a second transistor, a third transistor, and a fourth

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transistor, wherein a drain of the first transistor and a drain of the second transistor are coupled to the current source, a source of the first transistor is coupled to a drain of the third transistor where a first signal is drawn, a source of the second transistor is coupled to a drain of the fourth transistor where a second signal is drawn, sources of the third and the fourth transistors are coupled to ground voltage, and the first signal associated with the second signal is the differential signal.

Claim 3. (original) The cascade LCD driving circuit as recited in claim 1, wherein the differential signal transmitter comprises a signal amplifier, which converts and partially amplifies the differential signal before the differential signal is transmitted from the differential signal transmitter.

Claim 4. (currently amended) The cascade LCD driving circuit as recited in claim 3, wherein the amplifier comprises:

• a first current source and a second current source.